What is Claimed is:

1. A secretory lysosome targeting fusion moiety comprising: (a) a polypeptide that specifically localizes to a secretory lysosome and (b) a label polypeptide.

2. A secretory lysosome targeting fusion moiety comprising: (a) a nucleotide sequence encoding a polypeptide that specifically localizes to a secretory lysosome and (b) a nucleotide sequence encoding a label polypeptide.

3. The secretory lysosome targeting fusion moiety according to claim 1 or claim 2 wherein the polypeptide that specifically localizes to a secretory lysosome comprises a protease selected from the group consisting of: tryptases, chymases and carboxypeptidsases.

4. The secretory lysosome targeting fusion moiety according to claim 3 wherein the protease is selected from the group consisting of: Mouse Mast Cell Protease (MMCP)-1, -2, -3. –4, -5, -6, and –7; Rat Mast Cell Protease (RMCP) I and RMCP II; human chymases; human tryptases; Cathepsin G-like protease; Cathepsin G; carboxypeptidase A; and hexosaminidase.

5. The secretory lysosome targeting fusion moiety according to claim 4 wherein the protease is Rat Mast Cell Protease (RMCP) II according to GenBank accession no. J02712.

6. The secretory lysosome targeting fusion moiety according to claim 1 or claim 2 wherein the label polypeptide is a fluorescent molecule.

7. A cell comprising a secretory lysosome targeting fusion moiety according to claim 1 or claim 2.

8. The cell according to claim 7 wherein the label polypeptide is a fluorescent molecule.

9. The cell according to claim 8 wherein the fluorescent molecule is *Discosoma* sp. red fluorescent protein or green fluorescent protein.

10. The cell according to claim 7, wherein the cell is selected from the group consisting of: mast cells, basophils, hemopoietic cells, melanocytes, and goblet cells.

11. The cell according to claim 10, wherein the cell is a mast cell.

12. A cell line expressing a secretory lysosome targeting fusion moiety as deposited with the American Type Culture Collection and assigned accession number PTA-4571.

13. A method for detecting and quantifying degranulation comprising: (a) incubating a cell expressing a secretory lysosome targeting fusion moiety comprising a label molecule in the presence of a cell activator; (b) incubating the cell expressing the secretory lysosome targeting fusion moiety comprising a label molecule in the absence of the cell activator; and (c) detecting and quantifying the release of label in the supernatant in the presence of the cell activator compared to the release of label in the supernatant in the absence of the cell activator, wherein an increase in the release of label in the supernatant in the presence of the cell activator indicates degranulation.

14. A method for detecting and quantifying inhibition of degranulation comprising: (a) incubating a cell expressing a secretory lysosome targeting fusion moiety comprising a label molecule with a cell activator in the presence of a test substance; (b) incubating the cell expressing the secretory lysosome targeting fusion moiety comprising a label molecule with the cell activator in the absence of the test substance; and (c) detecting and quantifying a change in the release of label in the supernatant in the presence of the test substance compared to the release of label in the supernatant in the absence of test substance, wherein a decrease in the

release of label in the supernatant in the presence of test substance indicates inhibition of degranulation.

15. A method for detecting and quantifying degranulation at the single cell level comprising: (a) incubating a cell expressing a secretory lysosome targeting fusion moiety comprising a label molecule in the absence of a cell activator; (b) detecting and quantifying the amount of label in the absence of a cell activator, (c) incubating the cell of step (a) in the presence of a cell activator; (d) detecting and quantifying the amount of label in the presence of the cell activator; and (e) detecting a change in the amount of label in the cell in the presence of the cell activator compared to the amount of label in the cell in the absence the cell activator, wherein a decrease in the amount of label indicates degranulation.

16. A method for detecting and quantifying degranulation at the single cell level comprising: (a) incubating a cell expressing a secretory lysosome targeting fusion moiety comprising a label molecule in the presence of a cell activator; (b) detecting and quantifying the amount of label in the presence of the cell activator, (c) incubating the cell of step (a) in the presence of the cell activator and a test substance; (d) detecting and quantifying the amount of label in the presence of the cell activator and the test substance; and (e) comparing the amount of label in the cell in the presence of the test substance to the amount of label in the cell in the absence the test substance, wherein an increase in the amount of label in the presence of the test compound indicates degranulation.

17. The method according to any one of claims 13 to 16 wherein the cell expressing a secretory lysosome targeting fusion moiety is selected from the group consisting of: mast cells, basophils, hemopoietic cells, melanocytes, and goblet cells.

18. The method according to any one of claims 13 to 16 wherein the cell expressing a secretory lysosome targeting fusion moiety is a mast cell.

19. The method according to any one of claims 13 to 16 wherein the label molecule is a fluorescent molecule.

20. The method according to claim 19 wherein the fluorescent molecule is *Discosoma* sp. red fluorescent protein or green fluorescent protein.

21. The method according to any one of claims 13 to 16 wherein the secretory lysosome targeting fusion moiety comprises a nucleotide acid sequence encoding a protease selected from the group consisting of: tryptases, chymases and carboxypeptidases.

22. The method according to any one of claims 13 to 16 wherein the protease is selected from the group consisting of: Mouse Mast Cell Protease (MMCP)-1, -2, -3. –4, -5, -6, and –7; Rat Mast Cell Protease (RMCP) I and RMCP II; human chymases; human tryptases; Cathepsin G-like protease; Cathepsin G; carboxypeptidase A; and hexosaminidase.

23. The method according to any one of claims 13 to 16 wherein the protease is Rat Mast Cell Protease (RMCP) II.

24. The method according to any one of claims 13 to 16 wherein the cell line expressing the secretory lysosome targeting fusion moiety is the cell line as deposited with the American Type Culture Collection and assigned accession number PTA-4571.

25. The method according to any one of claims 13 to 16 wherein the cell activator is selected from the group consisting of: IgE and a multivalent antigen, phorbol myristate acetate, ionomycin, compound 48/80, toll-like receptors, and protease receptors

26. The method according to any one of claims 13 to 16 wherein the cell activator is selected from the group consisting of: IgE and a multivalent antigen, phorbol myristate acetate, and ionomycin.